

FORM PTO-1390  
(REV. 01-2003)

US DEPARTMENT OF COMMERCE PATENT &amp; TRADEMARK OFFICE

ATTORNEY'S DOCKET NUMBER  
126785**TRANSMITTAL LETTER TO THE UNITED STATES  
DESIGNATED/ELECTED OFFICE (DO/EO/US)  
CONCERNING A FILING UNDER 35 U.S.C. 371**U.S. APPLICATION NO. (If known, see 37 CFR 1.5)  
New U.S. National Phase of PCT/IP2005/005355  
**107584942**INTERNATIONAL APPLICATION NO.  
PCT/JP2005/005355INTERNATIONAL FILING DATE  
March 24, 2005PRIORITY DATE CLAIMED  
March 25, 2004TITLE OF INVENTION  
PHOTONIC CRYSTAL HAVING HETERO STRUCTURE AND OPTICAL DEVICE USING THE PHOTONIC CRYSTALAPPLICANT(S) FOR DO/EO/US  
Susumu NODA; Takashi ASANO; Seiichi TAKAYAMA

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.
4. ☒ The US has been elected (Article 31).
5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
  - a. ☒ is attached hereto (required only if not communicated by the International Bureau).
  - b. ☐ has been communicated by the International Bureau.
  - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☒ An English language translation of the International Application as filed (35 U.S.C. 371(c)(2))
  - a. ☒ is attached hereto.
  - b. ☐ has been previously submitted under 35 U.S.C. 154(d)(4).
  - c. ☐ The International Application was filed in English.
7. ☐ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
  - a. ☐ are attached hereto (required only if not communicated by the International Bureau).
  - b. ☐ have been communicated by the International Bureau.
  - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
  - d. ☐ have not been made and will not be made.
8. ☐ An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☒ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. ☐ An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

**Items 11 to 20 below concern document(s) or information included:**

11. ☐ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. ☒ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. ☒ A preliminary amendment.
14. ☒ An Application Data Sheet under 37 CFR 1.76.
15. ☐ A substitute specification.
16. ☐ A power of attorney and/or change of address letter.
17. ☐ A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821 - 1.825.
18. ☐ A second copy of the published international application under 35 U.S.C. 154(d)(4).
19. ☐ A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).
20. ☒ Other items or information: Designation of Ten Attorneys; International Search Report.

|   |              |  |            |   |    |
|---|--------------|--|------------|---|----|
| U.S. APPLICATION NO. (if known, see 37 C.F.R. 1.5)<br>New U.S. National Phase of<br>PCT/JP2005/005355   |              | INTERNATIONAL APPLICATION NO.<br>PCT/JP2005/005355 |            | ATTORNEY'S DOCKET NUMBER<br>126785                    |    |
| 21. <input checked="" type="checkbox"/> The following fees are submitted:   |              |  |            | CALCULATIONS      PTO USE ONLY                        |    |
|   |              |  |            |   |    |
| BASIC NATIONAL FEE (37 CFR 1.492(a)):   |              |  |            | \$ 300.00   |    |
| SEARCH FEE (37 CFR 1.492(b)(1)-(3)):  |              |  |            | \$400.00  |    |
| International preliminary examination report or written opinion prepared by the USPTO as IPEA or ISA and favorable as to novelty, inventive step, and industrial applicability for all claims presented in the application entering the national phase.....   |              |  |            | \$ 0.00   |    |
| International search fee (37 CFR 1.445(a)(2)) paid to USPTO as ISA.....   |              |  |            | \$ 100.00   |    |
| International search report provided to USPTO no later than the time at which the search fee is paid .....  |              |  |            | \$ 400.00   |    |
| All situations not provided for above .....   |              |  |            | \$ 500.00   |    |
| EXAMINATION FEE (37 CFR 1.492(c)(1)-(2)):   |              |  |            | \$200.00  |    |
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| Surcharge of \$130.00 for furnishing the search fee, the examination fee or the oath or declaration after the date of commencement of the national phase (37 CFR 1.492(h)).   |              |  |            | \$  |    |
| APPLICATION SIZE FEE<br>Total pages 38 - 100 =  |              | 0 ÷ 50   | = 10       | x 250 =   | \$ |
| †round up to next integer   |              |  |            |   |    |
| CLAIMS  | NUMBER FILED | NUMBER EXTRA                                       | RATE       | \$  |    |
| TOTAL CLAIMS  | 15 - 20      | = 0  | x 50.00 =  | \$  |    |
| INDEPENDENT CLAIMS  | 1 - 3        | = 0  | x 200.00 = | \$  |    |
| MULTIPLE DEPENDENT CLAIM(S)(if applicable)  |              |  | + 360.00 = | \$  |    |
| TOTAL OF ABOVE CALCULATIONS =   |              |  |            | \$900.00  |    |
| <input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.  |              |  |            | \$  |    |
| SUBTOTAL =  |              |  |            | \$900.00  |    |
| Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(i)).   |              |  |            | \$  |    |
| TOTAL NATIONAL FEE =  |              |  |            | \$900.00  |    |
| Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +  |              |  |            | \$  |    |
| TOTAL FEES ENCLOSED =   |              |  |            | \$900.00  |    |
|   |              |  |            | Amount to be refunded: \$                             |    |
|   |              |  |            | charged: \$   |    |
| <p>a. <input checked="" type="checkbox"/> Check No. 181671 in the amount of \$900.00 to cover the above fees is enclosed.</p> <p>b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of \$_____ to cover the above fees. A duplicate copy of this sheet is enclosed.</p> <p>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>15-0461</u>. A duplicate copy of this sheet is enclosed.</p> <p>d. <input type="checkbox"/> Fees are to be charged to a credit card. <b>WARNING:</b> Information on this form may become public. <b>Credit card information should not be included on this form.</b> Provide credit card information and authorization on PTO-2038.</p> <p><b>NOTE:</b> Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.</p> <p>SEND ALL CORRESPONDENCE TO:<br/>OLIFF &amp; BERRIDGE, PLC<br/>Customer Number: 25944</p> <p>Date <u>July 5, 2006</u></p> |              |  |            |   |    |
|   |              |  |            | NAME: James A. Oliff<br>REGISTRATION NUMBER: 27,075   |    |
|   |              |  |            | NAME: Jesse O. Collier<br>REGISTRATION NUMBER: 53,839 |    |

|  |              |  |  |                                       |    |
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| Date <u>July 5, 2006</u>   |              |  | NAME: James A. Oliff<br>REGISTRATION NUMBER: 27,075<br><br>NAME: Jesse O. Collier<br>REGISTRATION NUMBER: 53,839 |                                       |    |